

**S5 Table. Tests of spatial autocorrelation on the residuals of the multiple regression model on species richness (rarefied) and abundance.** Explanatory variables included non-spatial variables only. According to Bonferroni adjustment, significant values were set as the critical  $\alpha$  to 0.006 to correct for ordinary multiple regressions.

		Distance class							
Model		1	2	3	4	5	6	7	8
Rarefied richness									
Climate	Moran's <i>I</i>	-0.110	-0.097	-0.003	-0.041	0.022	-0.016	-0.057	0.073
	Probability	0.314	0.299	0.966	0.637	0.765	0.851	0.512	0.273
Abundance									
Climate	Moran's <i>I</i>	-0.049	-0.175	0.03	-0.055	0.026	-0.061	0.044	0.008
	Probability	0.667	0.077	0.687	0.534	0.719	0.464	0.601	0.872
Habitat *	Moran's <i>I</i>	-0.013	-0.037	-0.110	0.143	0.043	-0.149	-0.154	0.134
	Probability	0.911	0.670	0.212	0.152	0.575	0.140	0.125	0.112

Habitat\*: Environmental heterogeneity